
ENVIRONMENTAL Fact Sheet

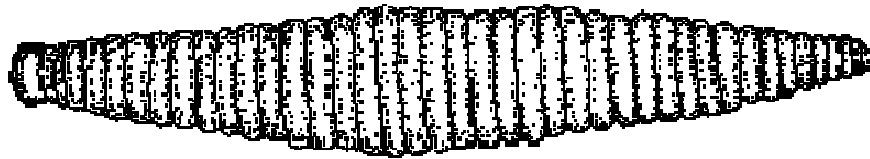


29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-3503 • www.des.nh.gov

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Leeches in New Hampshire Waters



Leeches Are Extremely Common

Leeches are a natural component of lake and pond ecosystems. The presence of leeches is in no way associated with polluted water. A number of different species of leeches exist. Most are predaceous, feeding on snails, worms, fish eggs, and aquatic insects. Others are scavengers, and a small minority actually suck blood from warm-blooded animals. The leeches, in turn, provide food to many fish and aquatic birds, as well as turtles, snakes, and crayfish. Leeches are probably present in most New Hampshire lakes. But, because they are chiefly nocturnal and because most don't attack humans, they are infrequently observed. However, a bather may periodically find a leech attached to his or her body after swimming. Although they cause no physical harm, many people find an attached leech to be somewhat disconcerting.

Leeches are found in many freshwater aquatic environments, including lakes, ponds, marshes, springs, and slow streams. They are generally found between the water's edge and two meters of depth, and prefer areas protected from wave action. Greatest numbers occur in areas having stones, sticks, plants or other debris to which they can adhere and which offer concealment.

Water disturbances such as splashing are known to attract leeches through tactile (sense of touch) stimulation. Leeches also have organs of chemical sense to find food. Blood sucking leeches may be attracted to bathing beaches, remaining hidden until lured by food.

The Northern Bloodsucker

Although as many as six different genera of leeches may take blood from a person if the opportunity arises, in New Hampshire only the northern bloodsucker regularly takes human blood. It attaches to the host with its caudal (tail) sucker and explores with its anterior end until a suitable spot is located, preference given to cuts, abrasions, or thin-skinned areas. A painless Y-shaped incision is made with 3 saw-like jaws. The incision is anaesthetized with an unknown substance and the host is unaware of the attachment. A salivary secretion including the anti-coagulant hirudin passes into the wound to facilitate the flow of blood. Sufficient blood is taken to distend the stomach and cause the leech to be as much as 5 times as heavy as it was when it began feeding. From the human aspect, however, the amount of blood taken is minimal. The

leech will voluntarily drop off after completing its meal and will seek darkness and concealment. It will not feed again for weeks or even months.

If the leech is allowed to complete its meal, much of the hirudin is withdrawn before dropping off. If the meal is curtailed, hirudin remains behind and the wound may continue to bleed for a short time. Some people are more sensitive to the anti-coagulant than others, just as some are more sensitive to mosquito bites. The usual reaction is an itching. Leeches apparently transmit no human diseases, although a bite could become infected like any other open wound.

Can leeches be controlled?

There are no guaranteed, environmentally safe chemical control measures that effectively reduce leech populations. Copper sulfate is lethal to fish at concentrations below what is lethal to leeches. Any chemical application to a state waterbody requires state review and permits. Excessive amounts of lime (100 pounds per acre per day) has been reported by at least one author to temporarily discourage leeches from a localized bathing area. However, in the lake as a whole, such a treatment would actually encourage leech growth.

Probably the easiest method to reduce leech populations is to use a piece of red meat or dead fish as an attractant. Once the bait is covered with leeches, it is removed from the water and disposed of on land.

If the water level can be manipulated, a rapid drop in water level of 4 to 5 feet in late fall will expose over-wintering leeches to freezing conditions. Other organisms may also be affected.

Leeches like to remain concealed under sticks, stones, and other debris. Cleaning a shoreline area of such material is another way to help reduce the number of leeches in an area.